




UNIDIRECTIONAL, MONOLITHIC PLANAR RING LASER WITH BIREFRINGENCE

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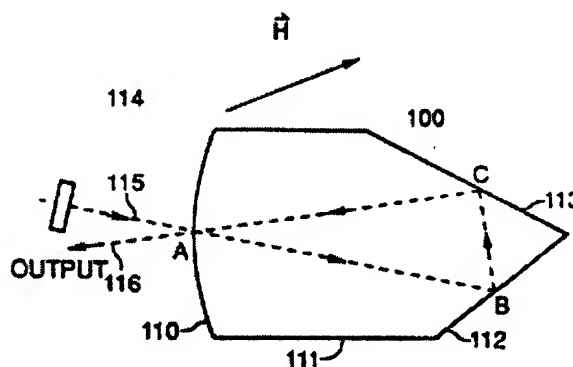
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Abstract of WO9110273

The present invention provides a means of inducing unidirectional oscillation in monolithic ring lasers in which the light path is planar. The intracavity optical diode that enforces unidirectional oscillation in the planar ring oscillator (100) is achieved by a combination of the nonreciprocal Faraday effect, a linear birefringence effect in which the principal axes of the birefringence are not parallel and perpendicular to the plane of propagation of the ring light path, and one or more partial polarizer effects. The present invention enables experimental optimization of polarization transformations within a monolithic planar ring oscillator (100) and also provides a means of tuning the frequency of the planar ring oscillator. The present invention makes it possible to vary both the reciprocal and nonreciprocal polarization transformations used to produce unidirectional oscillation.



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